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### A CASE OF HYDROPHOBIA.

BY JOHN C. BARTLETT, M. D., CHELMSPORD.

On the afternoon of February 4, 1877, I was called upon by Mrs. Strout (widow and housekeeper), aged forty-seven, with the request that I would cauterize a wound upon her hand, inflicted a few hours previously by a Spitz dog, a stranger to the family, which had laid itself upon the doorstep and manifested no appearance of sickness, but at first met her advances pleasantly by wagging his tail and such other expressions of affection as dogs usually manifest. Upon her attempting to pat his head, however, he snapped at her hand and bit her upon the thumb. I found it impossible to produce any sensation even by sulphuric acid, as a lady in the family with much presence of mind had deluged the wound with strong water of ammonia, under the action of which not only the wound itself, but the surrounding skin was so burned that all sensibility of the surface was destroyed, and appar-

ently all vitality.

I endeavored to reassure the patient by the fact that the previous cauterization had been so effectual that no absorption of virus was possible. I heard nothing more from her until Tuesday, April 3d, when I was called to her by a message that she was troubled with gaping. When I reached the house, she met me at the door, and the rush of cold air at once brought on a severe spasm or gasping, attended by a violent throwing up of the hands, as if respiration were to the last degree difficult. This continued for a few seconds only, but when the spasmodic action subsided the respiration continued rapid and excited, like that of a person who had been running. In order to test the character of the case more thoroughly, and at the same time allay any mere nervous excitement connected with it, I administered half a grain of sulphate of morphia in water, the sight of which produced an immediate recurrence of the convulsion and difficulty of respiration; but when once the fluid was poured well back in the mouth, the ability to swallow it was apparently normal, and this condition continued as long as any attempt was made to induce her to take water, indicating that the spasmodic tendency was chiefly confined to the larynx and muscles of respiration, while the coophagus was not affected. I received from her the following account of her illness: on Sunday, after attending church, she was conscious of not feeling quite as well as usual, with little appetite. After a good night's sleep, she felt refreshed on Monday morning, but had no appetite for her breakfast, and found herself unable to swallow her coffee from an uncomfortable sensation in the throat. At this time she suspected hydrophobia, but with the resolution which was a strong element in her character, and which led her to declare until the last day of her life that she should recover, she did a large family washing, although towards the latter part of the day she found it difficult to put her hands in water because it produced

a tendency to spasms.

On Tuesday morning she felt so much worse that she sought medical advice. There was no swelling nor any symptoms of inflammation about the throat; no pain, no local tenderness at any time through her sickness. There was no discoloration of the fauces, and nothing to indicate febrile action. At my second visit I requested the attendance of Dr. Howard, of Chelmsford, and we administered chloral hydrate in large doses, continuing also the morphine in combination with it, but entirely without alleviation of the symptoms, which were a highly excited condition of the nervous system and the unceasing recurrence of the severe spasms if she attempted to swallow liquids. At this period we sought the advice of Drs. Green and Spaulding, of Lowell, but owing to circumstances not necessary to mention we missed a consultation with them, as they did not reach the patient until eleven o'clock P. M. and remained in charge until two o'clock, continuing the same treatment by various methods of administration but without benefit. On Wednesday all attempt to administer anything by the mouth was abandoned, and nutritive injections with the medicines added were resorted to; at this time there was another symptom, namely, the violent and reckless ejection from the mouth of a frothy discharge, without any regard on her part to its direction, the attendants finding it necessary to be watchful to avoid its falling upon their persons.

There was no return of the spasms except on an attempt to drink or from the effect of a rush of cold air. Up to Wednesday night she had not closed her eyes in sleep since the Sunday night previous; during Wednesday night she slept about three hours, but without any allevia-

tion of the symptoms.

On Thursday, April 5th, she began to discharge from the stomach a large quantity of a green fluid, not by a true vomiting, but by simple ejection as an infant often ejects the milk which it has imbibed too freely. This tendency increased until the matter thrown off was poured out in large quantities, and although liquid it produced no convulsions, but the smallest quantity offered her at once brought them on-

During the whole course of the case the pulse remained very constant at about 80, except for a moment at times when some excitement occurred. Under such circumstances it was once noticed at 100. but immediately subsided to its former condition. On Thursday afternoon, a few hours before death, it rose to 112, and probably increased to the end. She died at midnight after an illness of four days. Neither pouring of water from one vessel to another, nor the flashing of light upon glass, nor the sight of water (unless she was asked to swallow it) ever brought on the spasms. In looking back upon the symptoms in this case, I cannot avoid asking myself the question, Why did this patient die? Taking away the peculiar symptoms which made it hydrophobia, I think no physician would for a moment have felt any anxiety about the case.

Indeed, without the local convulsions produced by the attempt to swallow liquids there would have been no case, and the prognosis given by Dr. Green at a consultation on Wednesday afternoon, when the question of recovery was broached, is about all that can be said upon the subject, namely, "It is hydrophobia, and therefore she must die."

It is greatly to be regretted that we know so little of the disease, and it will be to the everlasting disgrace of the Massachusetts Medical Society if, with the constant recurrence of cases at the present day, effectual means are not taken to systematize the knowledge we really have, and thoroughly to investigate the subject.

## A CONTRIBUTION TO THE STATISTICS OF GYNÆCOLOGY.

BY VIRGIL O. HARDON, M. D.,

Physician to the Out-Patient Department of the Rhode Island Hospital, and Physician to the Providence Dispensary.

During the past year my attention has often been directed to the frequency of the occurrence of laceration of the cervix uteri in parous women, and to the infrequency of the recognition of this condition by the majority of physicians. I therefore took pains during the three months of my last term of service as physician to the out-patient department of the Rhode Island Hospital to preserve notes of all the cases of uterine disease which came under my observation and treatment. As a result I offer the following statistics: -

Whole number of cases treated, twenty-seven. Of these, five occurred in nulliparous and twenty-two in parous women. In the five nulliparous women no laceration was found, of course. Of the twentytwo parous women, nineteen had laceration of the cervix to such an extent as to lead to eversion of the lips and apparent ulceration, and to produce symptoms of sufficient severity to cause the patient to apply

for treatment. These symptoms consisted in every case of leucorrhocal discharge, pain in the back and side, especially after walking, bearing down or dragging sensations about the loins, irritation of the bladder, shown by frequent micturition, in fourteen of the cases severe, continuous headache at the vertex of the head, extending back to the occiput, and in five cases gastric irritation, which was relieved as soon as the severity of the uterine symptoms was ameliorated by treatment.

The youngest patient was seventeen years old, the eldest forty-two, and the remainder of the cases were pretty evenly distributed between

these two ages.

Ten of the cases had been treated for "ulcers on the womb," but in no case had there been any permanent relief from the distressing symptoms. These are the statements of the patients, and must of course be

taken with a certain degree of allowance.

Seven of the cases were complicated by anteflexion, three by retroflexion, and one by polypus of the cervical canal. The remaining eight appeared to be uncomplicated, except by a considerable amount of endocervicitis and congestion of the cervix, which existed to a greater or less degree in every one of the cases. In every case there was the so-called ulceration taking its starting-point from the angle of the laceration covering nearly or quite the whole of the everted surfaces.

Of the nineteen patients, eight had borne but one child, while eleven had borne more than one, the greatest number being seven. In four-

teen, miscarriage had occurred at some previous time.

Nine referred the beginning of their symptoms to a previous miscarriage, six to a confinement at term, and four were unable to trace any such causation. Of the six who dated their trouble from a confinement, two described their labors as long ones, one being of seventy-four and the other of fifty-eight hours' duration. The third was delivered by forceps after being in labor about nine hours. The remaining three de-

scribed their labors as quick and easy ones.

In eight of the cases laceration occurred upon both sides of the cervix, in nine upon the left side alone, and in only two upon the right side alone. In every case there was evidence of previous cellulitis in the form of tenderness, thickening of the broad ligaments, and plastic deposit in the roof of the pelvis. In eleven cases the evidences of cellulitis existed upon both sides, and in eight cases only upon the left side. It is a noticeable fact that when the cellulitis had existed only upon one side it was invariably the left side. At a meeting of the New York Obstetrical Society, Professor Peaslee <sup>1</sup> referred to this fact, and gave as a reason "the return of the venous blood by the spermatic or ovarian vein proper, and not directly into the ascending vena cava by a short vein, as on the right side, whereby a venous stagnation and hypersemia might

<sup>1</sup> American Journal of Obstetries, October, 1876.

be more readily induced, and a cellulitis of the left side brought about."

Dwight has confirmed this theory by anatomical demonstration, and has shown that a varicose condition of the veins of the pelvic region may exist upon the left side while the right side remains perfectly normal. He considers this condition as analogous to varicocele in the male, and suggests that many of the cases of so-called cellulitis may be simply varicocele of the broad ligament and neighboring structures.

These cases still remain under treatment, and I hope at some future time to be able to give the results. Suffice it to say that the copious vaginal douche of hot water forms the chief element of the first stage of treatment preparatory to the operation devised by Emmet<sup>2</sup> for the restoration of the lacerated cervix to its normal condition. An appreciable relief of all the symptoms is visible in from one to two weeks after the use of the vaginal douche is commenced. To this rule I have found no exception.

In every case the examination was made with a Sims's speculum with the patient in Sims's position, for I believe that the diagnosis of laceration of the cervix is impossible except under these conditions.

As far as so small a number of cases can be considered as proving anything, these statistics go to show:

(1.) That laceration of the cervix to an extent sufficient to produce troublesome symptoms is a very frequent condition in women who have borne children.

(2.) That this condition may generally be referred to a miscarriage or to a labor at term as a cause, and that it may result from an easy labor as well as from a long or a hard one.

(8.) That as a rule extensive laceration of the cervix leads to pelvic cellulitis, and that both the laceration and the resulting cellulitis are very much more likely to occur upon the left than upon the right side.

## RECENT PROGRESS IN OPHTHALMOLOGY.

#### BY O. P. WADSWORTH, M. D.

Therapeutic Effect of Tattooing the Cornea. — Warning has been given, by several writers, against the wounding of vessels in tattooing the cornea as likely to interfere with the effect. Voelkers' experience, however, led him to a contrary opinion. He observed in cases tattooed for the opacities due to recurrent keratitis that the recurrence was stopped by the tattooing. In these cases the vessels on the cornea had been pricked and the coloring matter (India ink) had appeared to enter and fill the vessels; he concluded, therefore, that the disposition to fresh

<sup>&</sup>lt;sup>1</sup> Boston Medical and Surgical Journal, February 15, 1877.

American Journal of Obstetrics, November, 1874.

Concluded from page 531.

inflammation in vascularized cicatrices of the cornea depends on the vessels in them, and that tattooing causes obliteration of the vessels either in the trunk or capillary terminations, and so stops relapses.

To test the accuracy of this idea Hohn 1 undertook a series of experiments on rabbits. Having excited vascularized scars on the cornea he tattooed it near and at its edge, taking care to prick the vessels as much as possible, and later examined the corneæ under the microscope. The coloring matter was found largely in the needle wounds, but also in the corneal tissue near them, finely divided or in clumps inclosed in wandering cells or masses of protoplasm; it filled the vessels to a greater or less extent, was often mingled with the blood in them, and was particularly massed at their bifurcations; it was even present within the cells of the endothelial lining. The foreign substance acts, then, to obliterate the vessels by forming emboli or exciting the formation of thrombi; perhaps also by absorption of the substance into the endothelial cells the nutrition of the vessels is so changed as to cause their closure.

Recent Theories of the Nature of Glaucoma. — While Donders regarded the increase of intraocular tension as the essence of glaucoma, and the inflammatory symptoms as only a complication never occurring without previous increased pressure, Graefe considered the disease as of inflammatory nature, a form of irido-choroiditis, and the increased tension a result of the inflammation. Schnabel 2 believes neither of these theories is correct. Against the former it is urged that attacks of acute glaucoma have been repeatedly observed in perfectly sound eyes, against the latter that it supposes an inflammation in many cases (glaucoma simplex) which present no symptoms to authorize such a conclusion.

Among the chief symptoms of acute glaucoma is the turbidity of the media. This has usually been placed in the vitreous, but erroneously. The variations in degree of the transparency of the media depend upon the amount of opacity of the central parts of the cornea, often overlooked, and opacity of the vitreous does not exist. That this is the case is shown by the transparency of the media when the cornea is clear, by the exceedingly rapid clearing of the media after iridectomy in direct proportion to the clearing of the corneal opacity, and by the negative evidence afforded by the non-demonstration of opacity of the vitreous. The want of opacity of the vitreous is of importance in determining the nature of the disease, inasmuch as in all grave inflammations of the interior of the eye there is more or less turbidity of the vitreous.

Two forms of periodical obscuration of vision are to be distinguished in glaucoma: the one occurs suddenly, is attended with appearance

<sup>1</sup> Archiv für experimentelle Pathologie und Pharmakologie, B. vi. H. 3 and 4.

Archives of Ophthalmology and Otology, v. 3 and 4.

of rainbow colors, depends upon the corneal opacity, and is relieved by iridectomy; the other depends on affection of the perceptive apparatus, is not removed by iridectomy, and presents no objective symptom. The periodical corneal opacity is believed to be owing to the secretion of a turbid fluid caused by a neurosis of secretory nerves.

The pain with glaucoma may be very great when there are no symptoms of inflammation. Several cases have been reported in which neuralgia of the trigeminus preceded glaucoma, and another instance of this is given. The pain in glaucoma simplex is to be regarded as neuralgic, and that in inflammatory glaucoma not as a sign of the inflammatory process, but of an independent affection of the nerves.

That the disease is not essentially inflammatory is farther shown by the condition of the pupil, which is diametrically opposite to that found with iritis, by the absence of tenderness on pressure, and by the fact that iridectomy, which increases the inflammation in iritis, here excites no harmful reaction.

Anæsthesia of the cornea is not due, as generally held, to pressure on the sensitive nerves, but is a consequence of the neuralgia of these nerves. It is absent in glaucoma simplex, even in connection with great tension, and is present after attacks of pain, though the tension be not increased. Nor is increase of tension to be considered as a fundamental factor in glaucoma; there are cases in which cupping of the disc occurs without demonstrable increase of tension, others in which the cupping precedes the increase, and perhaps in such it may be assumed that there exists a coincident disease of the lamina cribrosa. In any case increase of tension must be waited for as the signal for an iridectomy. But the effect of iridectomy does not reside in its influence to reduce intraocular tension; the instant relief of pain and rapid clearing of the cornea after the operation points unmistakably to an analogy between this result and the relief of a neuralgia by neurotomy.

Knies examined fifteen glaucomatous eyes. He found as a most constant change an inflammatory adhesion of the periphery of the iris to the cornea so as to obliterate the canal of Fontana. The tissues about the canal of Schlemm also showed evidence of inflammation. Since it has been shown that the greater part of the filtration of the fluids of the eye outward takes place through the canal of Fontana, its obliteration must cause an increase of the intraocular tension, and increased tension is the main symptom of glaucoma. Besides, other symptoms of glaucoma, opacity of the cornea, ansesthesis of the cornea, iridoplegia, hyperæmia of the anterior scleral veins, may be most read ily explained by an inflammation of the tissues in this region. Schnabel's view that glaucoma is not of inflammatory nature is rendered im-

<sup>1</sup> Archiv für Ophthalmologie, xxii. 3.

probable by the constancy of inflammatory changes found. It cannot, however, be considered absolutely decided whether inflammation or increased pressure through nerve influence is the primary condition, and it must be admitted that nerve influence is of great importance in exciting the acute attacks. But Knies is inclined to believe that inflammation about Schlemm's canal is the primary lesion, though farther investigation is necessary to decide this. As for the way in which iridectomy brings relief the cases examined gave little indication, for in but few had iridectomy been made, and only in one successfully. In the latter the adhesion of the periphery of the iris to the cornea was not destroyed by the operation. It is regarded as probable that the cicatrix of the wound offers a new means of exit for the intraocular fluids, that it acts, according to Wecker's idea, as a filtration cicatrix.

Klein, by frequently repeated observation of two cases, was able to see the beginning and increase of a cupping of the optic disc, while there existed, during the first part of the process at least, no increase of intraocular pressure. The depression in these cases was not formed by the gradual enlargement of a previous physiological depression, nor did the whole surface of the disc recede in equal degree, but first one portion, then another of the disc sank, the peripheral boundary of the sunken portion always coinciding with the disc edge. This manner of production of the depression, as well as the impossibility of determining any abnormal tension, is regarded as showing that the cupping could not have been due to pressure, and increased pressure, therefore, cannot be regarded as a necessary condition for glaucoma. It is not assumed, however, that the excavation always takes place after the manner here observed; it may be formed by a slow equal depression of the whole disc surface, or by enlargement of physiological depression.

The yellowish-white ring surrounding the disc, so constantly found in glaucoma, Klein considers of far more symptomatic importance than has generally been admitted. The appearance, situation, and extent of this ring all point to its origin in a sclero-choroiditis posterior confined to the district supplied by the arterial circle in the sclera around the opticus (arterial circle of Zinn). As the lamina cribrosa is included within this district, an inflammatory process there interferes with its nutrition and renders it incapable of withstanding even the normal intraocular pressure, while without the coexistence of such a disturbance of nutrition even greatly increased intraocular tension is insufficient to cause excavation. Certainly increased tension, when it is present, is a very important factor in producing excavation, but there is a class of cases of glaucoma in which this factor plays no part.

Iridectomy influences the whole glaucomatous process, not simply the

<sup>1</sup> Archiv für Ophthalmologie, axii, 4.

intraocular tension: the latter is diminished only when it is abnormally great.

Nitrite of Amul for Blepharospasm. - Harlan 1 reports the case of a girl of fifteen years, who had extraction performed on both eyes on account of the trouble caused by congenital dislocation of the crystalline lenses. A few months later she returned with very severe blepharospasm. Examination under ether showed no disease of the eves. After a treatment of some months in hospital, including double canthoplasty and entropion operations on all four lids, she was discharged. relieved, but still dependent on blue glasses.

Several months later she again returned with the blepharospasm worse than before. She was then subjected for four months to every method of treatment that could be thought of, but without effect. Finally inhalation of nitrite of amyl was tried. The first day she inhaled 3ss. morning and noon, and 3i. at night, the second day 3i. three times, the third day 3i. twice, the fourth and fifth days each 3ss. once. By the end of the third inhalation she could partially open her eyes; after 7ss. had been taken she was fully under the effects of the drug. and on the fourth day she walked into the clinic room alone with her eyes open. For another month the patient was under observation, remained quite well, and had borne several ophthalmoscopic examinations without flinching.

Blepharoraphia Medialis. - Under this title Arlt 2 describes an operation intended to remedy the falling of the lower lid and consequent exposure of the eye which occurs with persistent facial paralysis. Starting from the level of the puncta lachrymales, he removes a strip of skin, two or three mm. wide and six or seven mm. long, from both upper and lower lid along the sides of the caruncle. The raw surfaces thus produced should meet at the inner angle, otherwise a sort of fistulous opening will exist there when the wounds have healed. The exposed surfaces are brought together by two or three sutures, and the eye kept closed till union is complete.

Prelachrymal Cysts. - Verneuil 3 calls attention to a hitherto undescribed species of cyst which he has had opportunity to observe in three cases. These cysts occupy the region of the lachrymal sack, but have no connection with it. They are interesting on account of their situation and their contents, which resemble olive-oil very much. They are generally, at least, congenital. In the three cases observed by Verneuil the tumors had existed as long as the patients could remember, and had given rise to no pain or trouble, except that caused by their appearance. They varied in size from that of a cherry stone to

<sup>&</sup>lt;sup>1</sup> American Journal of Medical Science, April, 1877.

<sup>&</sup>lt;sup>3</sup> Wiener medicinische Wochenschrift, No. 40, 1876.

Gazette des Hopitaux, December 30, 1876. Wiener Medinische Zeitung, No. 6, 1877

that of an almond; two were operated on by withdrawal of the contents by a syringe, in one of these iodine being afterwards injected, the third by incision. The contents of the cysts consisted of olein, margarin-crystals, margaric acid, and cholesterine.

# PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

A. L. MASON, M. D., SECRETARY.

FEBRUARY 24, 1877. Forty-two members were present, Dr. WILLIAMS, the president, in the chair.

The History of the Obstetric Forceps. — Dr. D. Hunt read a paper on the history of the obstetric forceps, which was published in full in our last number.

Plaster-of-Paris Bandages. — Dr. E. W. Cushing presented the following communication regarding the treatment of fractures of the femur by plaster-of-Paris bandages: —

The most striking advantage of plaster bandages is that by their use a person suffering from any simple fracture is able to move about, drive out, etc.; and this not only in fractures of the leg but in those of the thigh, to the treatment of which last by plaster-of-Paris bandages I beg leave to call your attention.

As this dressing is applied in Germany and Austria it is in no way superior to, if in fact it equals, the common American treatment; in France and England it is little if at all used; as used in America, however, it is light, strong, safe, and elegant, and it allows a person with a simple fracture of the femuric go about on crutches within thirty-six hours of the accident, if applied early.

The first case of fracture of the femur put up in America after the method with plastered roller bandages was, I believe, one of compound fracture at Bellevue Hospital, New York, under the care of Dr. Sayre, who flexed the limb at hip and knee, and cut fenestræ over the wounds; the case did very well, and the new treatment produced great enthusiasm among the house surgeons of the hospital and their successors, who devoted much time and labor to the investigation of the whole question of the treatment of fractures by plaster-of-Paris. Among those who advanced the subject and instructed their successors most carefully were Drs. Bryant, Curtis, McBurney, and St. John, with the approval and encouragement of the visiting surgeons. this time the mode of applying the dressing was as follows: a stout iron bar, well padded, is screwed to the end of a table and serves for a point of counter-extension against which the tuberosities of the ischia rest. The patient is etherized, the back being supported by pillows, and the buttocks are alung in a loop of roller bandage which passes over a stout wooden bar, running from the top of the perineal iron bar over the body of the patient to a stool on the table beyond his head; the leg is drawn down by pulleys attached to a roller-towel, fastened round the ankle by what sailors call a plank hitch; when by measurement the broken limb is as long as the other and no longer, the whole foot, leg, thigh, and pelvis being meanwhile swathed in a piece of old blanket cut to a suitable shape and rapidly pinned around the limb, the powdered rollers, first soaked for from three to five minutes in lukewarm salted water, are smoothly applied from the ankle up, forming a spica over the pelvis and the thigh, well up toward the perinsum; these are reinforced by pieces of old blanket, soaked in a cream of plaster-of-Paris, at the points of greatest strain, that is, the perinsum, trochanter, poples, etc. The whole is covered in with another layer of plastered roller, under the upper turns of which the projecting edge of the old blanket is neatly folded; a finish of a mixture of plaster and a little water, followed by some of the dry powder, is rubbed smoothly over the whole; on this it is often convenient to write the plaster, the relaxation from the ether still continuing, the foot from the toes up was similarly incased, the two parts uniting perfectly.

This mode of application gave excellent results, but in time improvements were made: first, it was found that it is not necessary to incase the foot at all, as the patella, the calf, and the malleoli give all the points necessary to keep up extension; secondly, it is not necessary to make the dressing go so far or be so strong in the perinsum as it was sometimes made, since the increase in size of the thigh upward, with the prominences of the trochanter and of the crest of the ilium, suffice to keep up an efficient counter-extension, powerfully aided by the weight of the limb and of the apparatus when the patient stands

or walks.

In 1871 Dr. Van Wagenen, my immediate successor in the second surgical division at Bellevue, conceived and constructed an apparatus by which the plaster bandage can be more conveniently applied and certain disadvantages may be avoided. The iron perineal bar was always a formidable object to look at; patients were afraid of it, the ill disposed said that it would injure the perinæum, which it never did, although it sometimes contused the labia in females. Dr. Van Wagenen built a folding frame, supporting, when open, a piece of carpet, on which the patient's whole back and head rest; the counterextension is obtained by two stout straps, smooth and well oiled, passing on each side around the perinæum, and attached by buckles or toggles to the apparatus, which is securely fastened to the table; these straps can easily be slipped out from under the rollers when the plaster has set and the patient is in bed. The sacrum rests on a piece of flat iron supported by any upright rod resting on the table. The flat piece is easily alipped out afterwards from under the spica. The direct extension is made by traction on both feet, using a crossbar with two canvas moccasins on it, thus insuring the perpendicularity of the feet and the straight position of the body and pelvis. By the use of this machine the patient can be more easily etherized, is much more comfortable, and can be more readily unfastened and put to bed without disturbing the dressing.

It remains to consider certain points connected with the application: of course angesthesia is necessary to relax the muscles and diminish the force requisite to produce the desired extension; under ether this is so moderate

that there is no danger of hurting the perinseum, if reasonable care is used. Compound fractures are put up in the same manner as simple ones, and after the plaster has set, fenestre are cut over the wounds; these should be edged round with oiled muslin, fastened by collodion in such a manner that the discharges may not soil or soften the plaster. If the fenestre are to be so large that the apparatus will probably be weakened, it must be strengthened by strips of tin or iron in suitable places when it is put on. Oakum is applied over the fenestre and secured with a bandage to absorb the discharges and prevent the flesh from bulging through the opening.

The results of this treatment are most gratifying, if it be applied properly and at the right time, that is, as soon after the accident as possible, before much swelling has taken place, or, if this is impossible, as soon as the first swelling has been reduced. If it be applied when the limb is much swellen will be necessary afterwards to cut out a strip of from half an inch to two inches in width, tapering from above downward to a point; this is done by wetting it with hot water and cutting the lines with a shoe-knife or an instru-

ment made for this purpose.

It is often impossible to tell, after recovery, by measurement or feeling which femur was broken, and the large number of cases now recorded with careful measurements shows that better results are obtained by this treatment than by any other. Allow me to put in evidence a synopsis of the returns for thirty-one cases of fractured femur, treated in Bellevue Hospital during the year 1872, and prepared by Dr. Van Wagenen for Dr. Sayre,1 by which it is shown that including five cases of compound or complicated fractures the average shortening was 700 inch. Of this whole number ten were shorter than usual, owing to peculiar circumstances of various kinds: one which had been run over by a truck was ununited; the other twenty cases give an aggregate shortening of 51 inches or an average of 1 inch, one being lengthened } inch and four being not shortened at all. It will be at once noticed that the worst results were obtained where from any cause the patient had to keep his bed. Moreover, I would observe that these measurements were taken some time after the splints were removed, to allow for possible shortening from sliding of the young callus under pressure, which is apt to occur unless care is taken.

It is right to consider here an objection which has been urged against this treatment, not on account of bad results but a priori. Is it quite safe? It seems a great risk to incase a fractured limb in an immovable dressing and not to look at it for five weeks. Now of course, like any important surgical procedure, this must be carried out secundum artem. A simple roller in careless hands may do fatal damage; it is always necessary to watch the circulation in the feet for two or three days, as long as swelling is to be feared. Curiously enough, however, a fractured limb when put up in a plaster bandage does not swell; the ends of the bone do not irritate the muscles, which in their turn are prevented from contracting spasmodically. If there is any coldness, numbness, or pain of the feet, if the toe nails are blue and the circulation

<sup>1</sup> Report on Fractures. By Lewis A. Sayre, M. D. Extracted from the Transactions of the American Medical Association. Philadelphia, 1874.

aluggish, the bandage must be cut along the median line, sprung open a little, and secured by a roller; in the country this may be done as a precautionary measure, and with proper care there is no doubt that the treatment is perfectly safe. This being the case it would seem that the convenience of the patient, which here coincides with that of the surgeon, ought to be sufficient ground for the general introduction of this treatment, for it is certainly a great hardship to be kept on one's back in bed for several weeks unnecessarily, and then to get up with a shortening of the limb greater than that which would have resulted from the more comfortable mode of treatment.

Dr. Chapwick was of the opinion that the results from this method were better than those from the ordinary methods of treating fractured femur.

Dr. Cushing mentioned the case of a patient with a broken thigh, who walked up four flights of stairs immediately after the plaster bandage was applied; and that of another who went to England as a hand on a sailing ves-

sel nine days after the fracture was put up.

Dr. AYER spoke of the case of a very excitable epileptic patient, thirtythree years of age, whom he had treated for fracture of the femur within the capsular ligament, with considerable shortening. Owing to the condition of the patient for two weeks after the injury no splints could be applied. Extension and counter-extension were kept up, sand-bags were employed, and after eighty-five days the shortening was found to be but three eighths of an inch.

Dr. Cushing remarked that it was usually the cases of intracapsular fracture which increased the average of shortening.

Dr. Bowditch asked whether plaster bandages had been applied in cases of the rupture of a ligament or part of a muscle.

DR. CUSHING answered that this method had been used in such cases by Dr. Sayre, also in sprains, and of late in Pott's disease.

Dr. Bixby said that in 1859 he had applied a plaster-of-Paris bandage to a recent fracture of both bones of the leg.

DR. J. W. CUSHING called attention to the fact that plaster-of-Paris bandages were in use for the treatment of recently broken thighs at the Massachu-

setts General Hospital as early as 1859.

Removal of Bougie from the Bladder, complicated by Stricture. - Dr. C. B. PORTER reported the case. The patient, aged sixty-six, entered the Massachusetts General Hospital complaining that he had lost a No. 4 bougie in his urethra. Twenty years before he had had stricture with retention for which he was tapped per rectum. He got along for ten years with the occasional use of the catheter, when perineal section was performed for retention. Since that time he had used a bougie constantly, his urethra gradually contracting until he could pass only a No. 4. He was in the habit of introducing the bougie and walking about his room for some time before withdrawing it. It was in one of these perambulations that the bougie slipped inside the meatus and afterward into the bladder. As no instrument suitable for grasping it could be made to pass the stricture it was "divulsed." A medium-sized lithotrite was then introduced into the bladder, the bougie was seized near its larger end and withdrawn. The patient left the hospital in a short time, and passed for himself daily a No. 12 metallic sound.

Vesical Calculus in a Female; Dilatation of the Urethra; Lithotrity. - DR. PORTER reported the case of Mary Dorsey, aged twenty-eight years, married, who after confinement fifteen months before began to suffer from frequency of micturition and pain during the act. She noticed this before she was able to be up and about after her confinement. In five or six weeks, as soon as she was able to walk about, the pain increased and became especially severe after micturition. At times also her flow of water would stop suddenly. She passed, as she says, a good deal of gravel which used to collect in the vessel. All her symptoms gradually increased in severity, and since the birth of her last child, about three months before she entered the hospital, her pain had been constant, with exacerbations after each act of micturition, and severe enough to double her up like an attack of colic. The pain was referred to the uterus and urethra, and after urinating she had a good deal of pain in her loins and hips. When sitting or lying she could hold her water, but as soon as she stood or walked she was unable to do so. She passed her water eight or ten times during the day and from four to six times during the night. She came to the hospital seeking relief from the great pain which she suffered.

After the patient was etherized a lithotrite was passed into the bladder and a stone about an inch and a half long was grasped. It required some little force to crush it. Considerable of the detritus was brought out between the blades of the lithotrite after each crushing. The urethra was dilated and the other fragments were drawn out through the urethra with nasal polypus forceps. Two of the fragments thus extracted were of considerable size, one of them measuring in its longest diameter nearly an inch, the other somewhat less. The bladder was then washed out with lukewarm water, and on introducing the finger through the urethra into the bladder nothing in the shape of fragments could be detected. The pieces removed weighed one hundred and seventy-four grains.

Since the operation she has done uninterruptedly well, has had no constitutional symptoms whatever, and has complained of nothing but soreness of the urethra while micturating. She was completely relieved from the severe pain which she suffered before the operation. The urine passed has contained no fragments. She passed her water four or five times a day. Subsequently she was sounded with a pewter sound and with the lithotrite, but nothing was detected. She was discharged well.

DR. W. H. BAKER had found Simon's urethral plugs of great value in dilating the female urethra, which he had had occasion to do in four cases. The length of time occupied was about fifteen minutes. No incontinence had re-

Dr. Jackson said that this case was interesting to him as having come on after confinement, and recalled a similar case operated on formerly by Dr. Bigelow. Dr. Jackson thought that such a stone might be crushed without dilating the urethra.

Dr. Porter knew of no reason why calculus should occur after confinement, except perhaps the occurrence of cystitis. With regard to the necessity for dilating the urethra, Dr. Porter said that without doing so in this case it would have taken a long time to remove the fragments. A very long sitting or perhaps several would have been required. He had used the same method for the cure of supposed fissure and irritability of the urethra.

DR. CHADWICK spoke of the difficulty met with in dilating the meatus and the lower half of the urethra, especially in cases of urethritis, and the ease with which the upper part is distended. He had found the bullet forceps inside a rubber tube an efficient dilator which protected the urethra from laceration.

Extensive Erysipelas in an Infant. — Dr. Homans reported a case of erysipelas in a child three weeks old, in which the disease extended from the face downward over the abdomen, back, etc. After two weeks the child was doing well. There was a slough on the head of the size of an ear. The disease was more extensive than he had observed in so young a child.

DES. BOWDITCH and ELLIS had seen similar cases in children where erysipelas had spread over the whole body going off by the toes.

### VACCINATION-SYPHILIS.1

THOSE who are skeptical in regard to the transmission of syphilis by vaccination will do well to study the six series of cases - in all twenty-four - of syphilis presented by Mr. Hutchinson in this fasciculus. Most of them have already appeared in the Transactions of the Royal Medical and Chirurgical Society. There are, however, a number of new cases and a series of plates giving illustrations of a subject which we believe has never before been depicted. It should be stated that the author does not produce these cases to demonstrate the dangers of human virus, but rather to throw light upon the means to be employed to avoid syphilis. A startling feature of some of these cases is the fact that the infants from which the virus was taken were in several cases apparently in good health, and in one the rules which he lays down for guidance in selection would have failed. We find in a study of these cases that if the syphilitic and vaccine virus be implanted at the same time, if the patient is susceptible to vaccination, the vesicle will pass through all its stages in the most characteristic manner until it is healed. Then at the end of a month a little red, firm, glossy tubercle appears which gradually increases in size and becomes hard; subsequently it ulcerates and presents a sore remarkable for its small amount of secretion and for the hardness of its base and edges. If not treated it may last for some months. Syphilis is not necessarily conveyed by vaccination from a syphilitic subject, but if the cell elements of the blood or of the tissues, by allowing the vesicle to drain or weep, are conveyed in the virus, inoculation may take place. Pure vaccine virus may be obtained from the vesicle of such a subject; as soon as the contents of the vesicle are exhausted the risk begins. Such are some of the views given in the interesting remarks which accompany the plates of this fasciculus. We must confess that the appearances of the primary sore as delineated in the plates are not as characteristic as one accustomed to observe them on the genitals

<sup>&</sup>lt;sup>1</sup> Illustrations of Clinical Surgery, consisting of Plates, etc., with Descriptive Letterpress. Fasciculus VI. By JOHATHAM HUTCHIMSON, F. B. C. S. Philadelphia: Lindsay and Blakiston. 1877. (For sale by A. Williams & Co.)

might expect to see. Our suspicions, however, the author tells us, should be aroused by a well-marked clinical occurrence. He says: "If syphilis is to follow, the sore must relapse and remain unhealed for months. Should a patient who entertains suspicion give a history of his sore having healed for good within the month, such fact is conclusive. Syphilis cannot be transmitted, excepting through a sore which follows the usual well-known laws as to periods of incubation, etc." The description of the disease is given in the author's usual clear and vigorous style. We notice for the first time one or two inelegancies of expression, as for example, "infant of four months old;" but these are conspicuous rather from their rarity in the portion of the work which has thus far appeared. The author draws no conclusions in regard to the value of animal vaccination, chiefly, we presume, because little or nothing is known in regard to the question by English physicians. The question of syphilitic inoculation by vaccination is such an important one that we would recommend the present fasciculus to the careful perusal of every practitioner.

### BRAUNE'S TOPOGRAPHICAL ANATOMY.1

Mr. Bellamy, of London, has done a good work in translating this excellent treatise. Braune's magnificent atlas of life-size colored plates of frozen sections made its first appearance in 1867, and was completed in 1871. Three years later he decided to publish an edition with the plates reduced by photography to half size, which admits of their being bound with the text in a convenient volume. It is this which is now reproduced in English. The sections are made in various planes, but the most valuable series is that of transverse horizontal cuts through the neck, thorax, abdomen, and pelvis. The text is a running description of the plates, with such scientific and practical deductions as the great anatomical learning of the author has suggested to him. Besides the large plates there are many in the text, chiefly from Pirogoff, which serve as very instructive commentaries. Several of them show the effect of effusions in the thoracic cavity and of disease of its organs, and others show the influence of distention of the bladder and rectum on the position of the uterus. One of the great advantages of this manner of studying anatomy is that it does away with tacitly admitted notions about the normal position of organs; we might as well speak of the normal position of the body. The author's remarks on this subject in reference to the curves of the spine deserve much attention: not only must they vary with different individuals but with different positions, and it must be remembered that the tonicity of the muscles is not without influence. A work of this kind is but ill suited to critical analysis; what we have to consider is its plan and the skill with which it has been carried out. In this case a favorable verdict has long since been rendered on the original, and we have only to say that the merits of the work have not suffered in Mr. Bellamy's translation, though there are defects that a captious critic might mention. The student of modern anatomy will be grateful to

<sup>&</sup>lt;sup>1</sup> An Atlas of Topographical Anatomy. By WILHELM BRAUKE. Translated by ED-WARD BELLAMY, F. R. C. S. Philadelphia: Lindsay and Blakiston. 1877.

Mr. Bellamy for having the boldness to transfer unchanged to English the technical terms sagittal, frontal, and transverse as applied to sections. A sagittal section means one in a vertical antero-posterior plane; a frontal one is in a transverse vertical plane, consequently at right angles to the former; and a transverse section is one at right angles to the long axis of the trunk or of a limb.

T. D.

## THE FALL OF THE CORONERS. II.

As we had anticipated, the bill abolishing coroners has passed the legislature. It went without discussion in either branch. At the last moment the opponents rallied, and Senator Fitzgerald, of Boston, who had the honor to be spokesman, moved a reconsideration, which happily was lost. If we are correctly informed, the object of this motion was to introduce an amendment making the number of medical examiners for Suffolk County six instead of two. We can well understand that the latter number is rather discouraging to ex-coroners and hungry claimants, for a black sheep could slip in more easily as one of six than as one of two.

The legislative committee on the case of Coroner A. W. K. Newton presented two reports. The gist of that of the majority was that the committee be discharged from further consideration of the case, as the legislature did not have jurisdiction and the coroner had resigned. The minority report, by Senator White and Representatives Hill, McCafferty, Wade, and Pillsbury, gives the following reasons for dissenting from the conclusions of the majority:—

"First, it is the right and duty of the legislature to inquire into the official conduct of any public officer, when formally called to its attention, with a view either to recommending his removal from office or to his prosecution in the courts; and this inquiry may be made either by a joint committee or by a separate committee of the house of representatives. In our judgment the precedents for such action leave this no longer an open question. Second, we do not consider that the tender of his resignation by a public officer, pending charges made against him, should put an end to or affect any such investigation, for the reason that, in our opinion, it would not be proper for the governor to accept a resignation of office under such circumstances, and thus allow a public officer to escape exposure. Third, at the first hearing given by the committee strong evidence was produced tending to prove very serious and disgraceful misconduct in office by Coroner Newton, and which, unless it is contradicted, of itself demands his removal from office. Several further hearings have been appointed, but each has been postponed in consequence of his illness. As a legislative inquiry into the conduct of a public officer is for the protection of the public, and in no sense a criminal proceeding, we do not think that the illness of such an officer ought ipso facto to put an end to such an inquiry, for the presence of the accused has never been considered essential to it, and the public interest might suffer seriously if because of such illness no proceedings could be had to remove an unfit officer from his office. And we are not satisfied that Mr. Newton might not, by deposition or written statement, contradict or explain the evidence already taken, and which seems to bear so heavily against him. The committee long since formally notified the accused that it would receive his deposition or affidavit, neither of which has been presented, and we are inclined to think that, if he desired to, he might, at least before the adjournment of the legislature, instruct counsel so as to enable the committee to push its inquiry into the charges upon which it had begun, as they are very simple, and any answer to them must, it should seem, be equally brief. We think that the petition and written evidence in the case should be transmitted to the governor, with a view to Newton's removal from office."

These views of the minority were embodied in an order which was substituted for the majority report, adopted by both houses of the legislature, and laid before the governor. This action of the legislature establishes in the most authoritative manner the doctrine that in Massachusetts a public officer is not to be allowed to escape the results of an inquiry into his misconduct by resignation.

### MEDICAL NOTES.

— At a recent meeting of the Suffolk District Medical Society, Dr. J. B. S. Jackson showed two photographs of the late Prof. Jeffries Wyman, by Metcalf and Weldon, of this city. He remarked that these photographs were of uncommon excellence, showing Dr. Wyman as he appeared in his best days,

and that members might like to know where to procure them.

— Dr. Dmitriew makes the following preliminary communication, in a recent exchange, in the form of a summary: Chloral hydrate acts powerfully in arresting certain fermentative processes, — as ammonia-potash and lactic acid fermentation, — even in weak solution (one per cent.). A one per cent. solution applied to a wound with a bad, foul-smelling secretion destroys the bad odor of the secretion quickly, and at the same time, on account of its irritating property, rouses a prompt development of healthy granulations, thereby hastening cicatrization. In external application chloral hydrate has a local, soothing action. His observations were made partly on dogs, partly on human beings.

—According to The Lancet, further experience in the use of hypodermic injection of chloral hydrate in cholera does not confirm the hopes which were at first entertained of its great value as a remedy in the malady. Dr. W. G. Hunter reports to the Medical Society of Bombay that he treated thirty-two cases of cholera by subcutaneous injections of hydrate of chloral in accordance with the directions laid down by Mr. Hall. The results were so disastrous that Dr. Hunter did not feel justified in pursuing the method farther. One patient died of traumatic tetanus, the effect of the punctures of the hypoder-

mic syringe.

— In a paper on the Registration of Disease, published in *The Practitioner* for January, 1877, William Squire, M. D., presents the advantages that would be derived could an efficient system be organized for dealing with the trustworthy facts of sickness and its fatality. The record of death with its cause and the age at which it falls has already extended our knowledge of the nat-

ural history of disease and enabled us to do something for its prevention and cure. "What has thus been done by taking the one extreme result of disease leads us to see how much more might be possible could we arrive at an earlier knowledge of the distribution of disease or find the points of its earliest incidence. Disease . . . would thus be met at its outset, and be prevented repelled, or defeated; for disease, not death, is the foe we are bound to oppose."

The first condition of success in such a contest, says Dr. Squire, is the obtaining early and complete information of the presence of the enemy, and the chief points of attack. Such a registration as is proposed by the writer would not be a substitute for the register of deaths; it would give useful warning beforehand; but it would be of full use and value only when taken

in conjunction with the mortality returns.

The only attempt in this vicinity, so far as we are aware, to establish a registration of prevalent diseases was that made by the State Board of Health of Massachusetts, during the year 1875. Its results were published in a paper by Dr. Draper in the Annual Report of the State Board of Health for 1876. It has been a matter of regret on the part of many physicians that the plan thus begun could not have been continued with such modifications as experience might suggest instead of being dropped after but a year's trial.

- Edlessen emphatically advises the use of chlorate of potash in acute and chronic cystitis (Deutsches Archiv für klinische Medicin, Band xix., Heft 1). It rapidly diminishes the amount of pus in the urine, and quickly causes the subjective symptoms to disappear or to diminish in intensity, and gives an acid reaction to the urine again. He recommends it especially in those cases in which oil of turpentine for any reason is contra-indicated, as when catarrh of the stomach, chronic gastric ulcer, or nephritis exists at the same time.

- We have examined with interest the fifth report of the Foochow Medical Missionary Hospital, an institution connected with the A. B. C. F. M. and under the care of Dauphin W. Osgood, M. D. Connected with the hospital is a dispensary. The number of patients treated during the eleven months previous to June 1, 1876, was 5134. Skin diseases, says the report, "continue to outnumber all others, and will do so until the Chinese learn that cleanliness is next to godliness." Very many diseases of the eye come for treatment; and the list of cases treated contains a large number of the various medical and surgical maladies. Among the surgical operations performed we notice lithotomy, resections of the elbow and of the upper and lower jaw; in one of the operations the entire radius was removed for necrosis. A recent report comes from the patient that his arm is quite well, but Dr. Osgood is unable to say how useful a member it will prove to be.

The Chinese are reported to consider minute directions in regard to food as of great importance, and some extracts from the Golden Mirror, a native work, compiled by order of the emperor, are given. Among its sayings are that horseflesh may be eaten if care is taken to avoid the part that has been covered with the saddle; that the liver must not be eaten as it will cause death unless the eater partakes of the following prescription: take the excrement from a male cat, pulverize and dissolve it, and take internally as required. Pregnant women must abstain from eating turtles, chickens, and ducks, lest their offspring be deaf and dumb. It is feared that the child will have harelip if the mother eats rabbits.

It is stated that a good work on anatomy is greatly needed in China. Some wood-cuts taken from Chinese medical works are copied into the hospital report, which show how absurd and erroneous are the notions which the

Chinese have regarding human anatomy.

- The British Medical Journal for February 24, 1877, gives an abstract of the report of the trustees of the Peabody fund for the year 1876, and moreover states that the Peabody donation fund is undoubtedly destined to exert not only an appreciable but a marked effect upon the health of London. From the report of the trustees it appears that on December 31st last the fund amounted to £643,317. Of this capital, £166,511 was unexpended at the end of the year. During the year 1876 a new group of blocks of Peabody buildings was completed and fully tenanted, and the aggregate number of residents in all the buildings erected by the trustees amounted at the end of the year to 7797, an increase of 2169 upon the number in residence at the end of 1875. When the buildings now in process of construction are completed, and this is expected in the course of the present year, the trustees will have provided dwellings for 2165 families, representing a population exceeding ten thousand persons. The weekly wages of the heads of all the families in residence in the buildings averaged less than twenty-five shillings, proving that the majority of the tenants belong to the poorer of the working classes. The weekly rents range from two shillings, the lowest price for a single room, to five shillings nine pence and seven shillings sixpence, the highest for three and four rooms respectively. The report also states that the death-rate among the occupants of the Peabody buildings during 1876, calculated upon the mean number of inhabitants, did not exceed 19.02 per 1000; this rate was 3.3 per 1000 below the average rate in the whole of London.

## MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. CABOT.

#### [REPORTED BY O. P. HOWE.]

Fracture of the Patella.—P. F., thirty-one years of age, while driving, was kicked in the knee by his horse, causing a transverse fracture of the patella, the lower fragment being broken in two pieces. A temporary splint was put on the leg, and he was brought to the hospital December 22d, ten hours after the accident. The knee was then very much swollen, and there was pain and exquisite tenderness in the neighborhood of the fracture. There was about two thirds of an inch separation between the upper and lower fragments of the patella. The leg was put on a ham splint and ice bags were applied.

Two days later the effusion having somewhat subsided an attempt was made to bring the fragments into apposition. The apparatus used was as follows: two narrow, long side splints extended on each side of the leg from the middle of the thigh to about ten inches below the foot. These splints were connected at the lower end by a movable cross-bar which could be fixed

at any part of the splint by means of pegs. Through the middle of the crossbar played a screw, to the upper end of which was attached a wire yard. The yard, of course, advanced or retreated with the turn of the screw. Thus far it was simply a Dessault's apparatus. Two broad strips of plaster were started well up the thigh and fastened securely to within a short distance of the patella; these strips passed down the leg, to be attached to the wire yard at the end of the screw, thus furnishing extension. Similar strips of plaster. but somewhat narrower, were started on the leg and passed upwards, through slits in the upper pieces of plaster, to be attached to the end of the splint. This supplied counter-extension. By turning the screw, then, the fragments of the patella could be drawn together by a force to be measured only by the strength of the apparatus and the patient's endurance. The ice hags were still kept on, and at the end of a week the effusion had almost entirely disappeared. For the next three weeks the fragments were kept in close apposition without pain to the man. A dextrine bandage was then applied, and the patient discharged. Three weeks later the dextrine was sawed off, and firm union was found, the fragments being about one eighth of an inch apart.

Tumor of the Neck. — The patient, a child three years of age, entered the hospital November 18th, with a tumor of eighteen months' standing. This at first increased slowly, but during the last few months had grown very rapidly. At the time of his entrance it was a lobulated mass, hard, freely movable, and extending from just below the left ear to the clavicle, and from the median line of the neck in front to the transverse processes of the cervical vertebra behind. The measurement of the child's neck at the largest part was fifteen inches. Deglutition and respiration were not interfered with. There was no enlargement of the spleen or lymphatic glands. Examination of the blood under the microscope showed the proportion of white corpuscles to be twice the normal amount.

The boy was ordered five drops of the syrup of the iodide of iron three times a day. This, however, was followed by diarrhoea, necessitating a discontinuance of the medicine. The child's appetite was poor, his countenance pale, and his sleep disturbed at night.

December 1st. Two grains of iodide of potassium twice a day in milk were ordered, and an ounce of brandy during the day as a stimulant. From this time he began to improve in his general health, and the tumor to diminish in size.

December 21st. The circumference of his neck was three quarters of an inch less, and the tumor had softened so that three separate, hard glands could now be felt where before there was one hard mass. The iodide of potassium was increased to six grains daily; the tumor was rubbed with iodide of lead ointment, and was poulticed at night. There was constant improvement until February 2d, when he was discharged to continue the same treatment at home. At that time the tumor had diminished two inches in size, and he was in far better health and spirits than when he entered.

An examination of the blood just previous to his departure showed the proportion of white corpuscles to be normal.

November 13th. A letter was received from his father saying that while he

was doing well and the tumor still diminishing, he was attacked by diphtheria and died.

The points of interest in this case were the rapid diminution of size and hardness in the tumor, the great improvement in the general health, and especially the very great change in the proportion of white corpuscles in the blood, one microscopist who examined it saying that less than the usual number of white corpuscles in health were found at the time when the patient was discharged.

## LETTER FROM BERLIN.

MESSES. EDITORS, — The sketch of a German medical doctorate may be of possible interest to your readers. It is one of those occurrences not given in the university calendar, nor does it usually find its way into the medical world through any official channel; it is left to the casual looker-on, who, as often happens, and certainly in this case, is a thorough foreigner. A year in Berlin, in daily intercourse with professors, privat-docents, assistants, and candidates, warrants me in giving the following curious description, even at the questionable indulgence of tedious detail. As one cannot be his own critic, in a truly logical or constructive sense, it is proper to add that the year was spent not only in daily association with the parties alluded to, but at the same time in almost complete abstinence from the society of American gentlemen at the university.

The promotion of a candidate for medical honors at a German university is distinguished by none of the characteristics of the American university or college commencement. There is no given day of a special week on which the medical student is graduated. An auditorium filled with admiring friends who applaud with the dangerous help of fans and flowers, marshals and music, prizes and valedictories, are unknown elements in a German university. The only public evidence of his graduation is the notice, in large Latin print, signed by the dean, whose name and that of the candidate are the only portions of the document in ink. This notice is nailed on a black wooden bulletin-box, which is spanned by a wire net-work and locked, and which hange for a specified time in a specified place in the large vestibule of the university. Here it is open to the inspection of thousands of students from all quarters of the globe, of whom perhaps one twentieth of the matriculated medical students know the candidate by name. In other words, out of about two hundred and fifty medical students at the university, perhaps ten know or care about the doctorate of a comrade; such is a fair estimate of the actual publicity of a graduation. This applies as well to the departments of theology, law, and philosophy as to that of medicine. Ceremony is the distinguishing characteristic of the affair. Perhaps I cannot do better than to describe one of these scenes, in which I was invited to assist. Entering the main portal of the university you pass across the vestibule, where the shuffling and scratching of boots on the marble pavement announce the end of an hour. An orderly confusion, the interchange of salutations, a hurrying to and fro of hundreds of students suggests the occasion. At the left side of the vestibule is a room about twenty feet square, furnished with sixty sitting places on all sides, like an American school-room. At one end opposite the entrance door is a high pulpit, and before it a smaller one, three feet lower. Three simple chairs stand unoccupied, perhaps six feet before the lower desk. On this occasion not over ten students, some law, some theological, few I knew to be medical, comprised the audience. At precisely half past eleven o'clock the dean of the medical faculty of 1876, Baron v. Langenbeck (so he signs his name to a matriculation certificate), enters the main door, dressed in a long magenta-velvet cloak, and cap of the same, and lavender gloves. Three young men, a Scotchman from the University of Aberdeen, a Frenchman from the University of Paris, and myself, opponents of three theses attached to the dissertation of the candidate, take the three chairs, while the candidate, who is to receive his diploma in proprid persond, enters the lower pulpit. He is an American gentleman of forty-five, a graduate of twenty years ago from Jefferson College, Philadelphia, who passed as number one into the surgical corps of the United States Navy, and is a member of the Royal College of Surgeons, London. With the three opponents before him he is in full evening dress. The five parties to the ceremony hold in their hands his "inaugural dissertation," which in this instance was in English, the five copies being elegantly bound; the dean and opponents retain the copies used by them as gifts from the candidate. Usually several hundred copies are printed in pamphlet, which are at the disposition of the candidate. The expense is borne by himself, and is between one hundred and fifty and two hundred and twenty-five thalers, according to the amount of lithographic work; a thaler is seventy-five cents in American gold. The laws of the university or of the government - for it is one and the same thing - provide one printer for this kind of work, making it impossible for the candidate to make his own selection. In addition to this dissertation, which up to about fifteen years ago was required to be in Latin, but is now usually in German, there is a short biographical sketch, with a notice of positions of trust, if there have been such, in Latin; also three topics, or theses, two in medicine and one in surgery, or vice versa, in Latin also, which are to be combated by the three opponents and to be defended by the candidate. This is the style of inaugural dissertation in each of the four departments of philosophy, law, theology, and medicine. The ceremony - for it is simply such - was begun by the dean, who alluded to some point in the dissertation and commented upon it; the dissertation was not read in full. The dean was answered by the candidate, both speaking in German. It now became the part of the opponents to answer or argue against the three de facto propositions, or theses, for each one of which one was selected; the Scotchman opposed the first Latin thesis in English, the Frenchman the second in very bad German, while I opposed the only surgical one in English. The candidate responded to the opposition in the language in which it was given, the opponents, of course, expressing themselves satisfied with the proposition under such explanations. The venerable dean then ascended the higher pulpit, proclaimed in Latin the doctorate of the candidate, and gave him the oath and grip of the medical faculty of the university. The dissertation was admirably handled, its subject being that fruitful bone of contention among surgeons, - Fractures of the Femur and their Treatment. Some very nice points were brought out, as, for instance, the mechanical play of the ligamentum ileo-femorale, known as Bertin's ligament; the axis of rotation of the thigh, which Hyrtl has found to lie not in the axis of the femur, but internal to that line: the nutrition of the head in fractures of the surgical neck, not depending, according to Hyrtl, on the artery supplying the ligamentum teres, but, like that of the cornea, depending on a scanty serous transudation, - for the artery has been found not to penetrate the head of the bone, but, on reaching it, to return again. This general anatomical comparison is good, so far as the mere structure and course of the respective arteries are concerned, namely, that to the head of the femur and those to the cornea. Neither has, strictly speaking, arterial blood, nor, of course, the other factors of a complete circulation. A wide difference, however, enters into the clinical course of injuries to each, dependent at the same time on the circulation. A separated femoral head (Hyrtl) continues to be freely nourished by the serous effusion following trauma; an ulcus interstitiale or an ulcus serpens corneæ profundum, after passing definite stages of progression, destruction, and rest, enters stadia of retrogression and cicatrization by new vessels coursing towards its borders, these new vessels coming not from the recurrent net-work at the corneal border known as the anterior and posterior conjunctival arteries, but according to Arnold and Recklinghausen from the episcleral arteries, which are entirely superficial. But it is unnecessary to enter into this field here.

The English and Latin of the ceremony were presumably good. The expense of the printing and the dress were simply to conform to the demands of form. If I may use the language of German criticism in analogous cases, — not a judicious and perhaps a discourteous method of argument, — the expense is a swindle and the ceremony is a farce; it was the most complete farce I ever witnessed, simply because so dignified and shallow. If America errs in showy commencements, with éclat and spread-eagleism, the Germans go as far to the other extreme in the stupidity of mode and in the submission to form. It would never do for a dashing Prussian hussar, for instance, to promenade in the fashionable Unter den Linden without slapping his scabbard on the asphalt at every step; the café courts his custom; it dignifies the establishment if his firmly set spurs send a metallic echo through the rooms, or his loosely hung sword tells by its jingle the number of buckles and springs of its trappings, and the head waiter knows that all this promises an extra groschen in

It must be remembered that the candidate has long before sent in his name to the university questor, asking an examination when the faculty has a sufficient number of applicants, not less than three nor more than six; he receives an order from the same officer to appear at a certain hour at the house of the dean, where he spends, with four professors, several hours in oral and written examination. The candidates are policed by the private servant of the dean, a man in livery, while all precaution has been taken to remove every source of medical information. As Germans religiously believe in eating and drinking with their work, a fine collation usually occupies the long centre table of the room, with Bordeaux and Rhine wines, which the gentlemen appropriate

at option. I have heard of some vile fellows who bribed the servant to bring up extra flasks of wine from the dean's cellar, an unusual exhibition of medical larceny. The same candidates are summoned several times before different groups of four professors, until the whole list of examiners is exhausted. Sometimes a candidate is allowed two trials. The examinations occupy several weeks, not unfrequently six months, and are by law in German, and hence exceedingly difficult for a foreigner. To such, however, a proper allowance is made. While the technical questions and answers must be in German, the professors are willing to explain in French or Latin, if the candidates prefer. Few of them are on speaking terms with English. I am told that Virchow, in pathology, is one of the severest examiners in this university, and that from sixty to eighty per cent. of candidates fall through his hands.

One word in regard to the length of time of study demanded of the medical student and its style of prosecution, and I will close this sketch. Since the establishment of this university by Friedrich Wilhelm III. in 1809, and until the proclamation of the German Confederation in 1841, the medical student was required to have spent nine years in a gymnasium, and to produce his certificate of final examination. Since Herr Falk, the cultus-minister under Prince Bismarck's chancellorship, assumed the department of education and ecclesiastical affairs, the medical student is entitled to study for a degree after successfully passing through the realschule. In gross, the difference in requirements consists of less Latin, Greek, and pure mathematics; more French, English, natural history, and natural sciences. If, however, the proficiency in the other branches is no more than my acquaintance with it leads me to suppose with regard to English, the realschule is not an adequate supplement to the gymnasium. My large acquaintance with Prussian students in Berlin causes me to estimate their grammatical knowledge of the English language as inferior to the knowledge of French acquired by the American student. The medical student is required to take lectures in logic and the philosophy of history in his first medical year, and later is examined in these branches.

Every medical student is a graduate of a gymnasium or realschule, where he has studied the classics and higher mathematics, as American students do at college. In the classics he learns to write and converse, more in Latin than in Greek. In mathematics the gymnasium does not attempt so much as the American college. In pure mathematics, however, the student is thoroughly drilled. Such branches as astronomy and mathematical optics belong rather to the university or to special schools. With such a foundation he takes an examination making him eligible to study medicine. Four years - two semesters, or terms, to the year - are devoted to medical studies before he can practice medicine, as we say, and which is the fact, but as the Germans say, before he can take his state's examination. It must not be forgotten that these men are servants of the state; it is to the state that in after-life they look for honors. At the end of three years they may present themselves for the socalled "doctor examen," which, however, is not in the same sense as ours, their "staats examen" being their final one, analogous to our final and only examination. This latter is known as the "rigorosum," and a successful pullthrough entitles the applicant to be "magister medicinæ, chirurgæ, et obstetriem." Three grades of proficiency are known: the highest is classified as "magno cum laude;" the second, "cum laude;" while the omission of any qualification characterizes the lowest degree of proficiency, and implies that the candidate has simply passed.

The system of courses of lectures does not obtain here. In four years, or eight semesters, the student gets all that he will be examined upon, or, in other words, the whole curriculum of medical studies. In this way the same students remain, as a rule, the whole time at the same university; that is, those who propose to be graduated. The year begins with the fall semester in October and ends with the summer one in July; there is a long vacation between the semesters, usually from the middle of March till the first of May; the professors are never ready for work until two or three weeks of the beginning of a semester have gone by, and vie with each other to close their lectures as much short of the published time; at Christmas the university is closed for three weeks. To Easter, Resurrection Day, Penitence Day, and Whitsuntide liberal grants of time are made, so that in actual work one may reckon seven months of the year; certainly not much more public work than that found in the best medical schools of the United States.

How does the German student study? That is a question I cannot satisfactorily answer, for I never saw one hard at work, bending his energies to a given task, doing so much to-day, expecting to do so much to-morrow, and so on. The system of instruction being on the university as contradistinguished from the college plan, he listens to lectures, following no text-book. As a rule, be takes notes in ink. He is attentive and always respectful. Perhaps he remembers that the state is before him in the person of the professor. Between one and three o'clock in the day he may be found at home on the sofa, this article of furniture being a specialty in students' rooms in Berlin. After seven in the evening he is usually found in a kneipe, or beer saloon, with his colleagues. Several students arrange together to spend their evenings in that way till ten o'clock, after which hour the houses of Berlin are locked to public use. Students consult whether they will have light or dark beer, frequent a lokal, talk, and play a light game of cards till the hour of separation, to renew the scene again twenty-one hours later. They are noisy but not troublesome, and their patronage is usually characterized by a well-known in sufficiency of waiters' fees. Here they compare notes, lampoon the faculty, and study, if it may be called so, in a peripatetic, argumentative way for four years. As the examinations are forbidding, they are then found at home of evenings, either rushing through their books or discussing intelligently the lectures of the semester. I do not wonder at the length of time devoted to the work. The German student expects to go along slowly and comfortably He knows there is time enough, and the instruction is the best the world can offer. He is quite right as to both conclusions, though conceited in his view about the second. Accustomed to dilatory habits in his professors, not fearing a quiz, with no stimulus other than his love for medical studies, he lets himself be lectured to, day after day, until it becomes time for him to meet an examination. Daily work in the quiet room, recitations, and a systematic quis are not in his regime. It is only a familiarity with the quiet of German life, with its few luxuries, and its faith in the enjoyment of the moment that can make such a sketch appreciable. In bustling, ambitious America it would typify a torpidity of thought, stupidity of existence, and a view of life materialistic if it did not merit the name of philosophic. Such is the average German medical student, whose manner of living is as unwelcome to the foreigner as his advantages are coveted.

A system of six weeks' courses has been organized this year in Berlin to retain, if possible, the great numbers of German and foreign students who go to Vienna to develop themselves in special directions. Since the famous days of medicine in Paris, Vienna has become the centre of the medical world of Europe. Berlin has been losing in numbers, on account of this systematic and concentrated but in many respects faulty system of study. A large number of the faculty, privat-docents, and assistants have organized courses, distinct from official instruction, which began with the middle of March and will continue until May. Some of the best names of the faculty are upon the list while some of the most popular specialties are the least represented. Of the latter are the courses in physiology, diseases of the nervous system, otology, diseases of the mouth and teeth, electro-therapy, dermatology, and syphilis. The largest representation of teachers is in the department of state medicine and hygiene, the latter embracing microscopic as well as macroscopic examinations. The course on normal histology by Orth lasts two months, while Langenbeck, as for a few years past, continues his valuable course of surgical operations on the cadaver at six o'clock in the morning through the summer

For a first effort the plan is an extensive one, but will undoubtedly bear improvement. Its disadvantages are that the time is restricted to but one part of the year, whereas in Vienna courses are in operation every day in the year. Another serious objection is found in the concise sentence at the end of the prospectus, namely, three hundred marks (about seventy-five dollars) must be guaranteed by each class of students at the beginning of the course, classes to consist of not more than from ten to twelve. Foreigners will recognize a characteristically German style of business in this codicil, and German students will be the first to run away from it.

Yours truly,

MED.

BERLIN, March 31, 1877.

#### KNOT IN THE UMBILICAL CORD.

MESSES. EDITORS, — October 29, 1876, I was called to attend Mrs. J. S. W. in her fifth labor, the previous ones having been natural. At this time all went well till about the commencement of the second stage, when she complained of the excessive motion of the child, and such motion was very apparent to the by-standers. It ceased, and the child was born without anything to complicate matters, but it was born "still," nor could I establish respiration, although I tried quite a long time. On searching for the cause of the death of the child, I found a knot in the unabilical cord, at about one foot from the placents. The cord was very long (four feet and ten inches by actual measurement) and was wound about the body and limbs of the child. I could not the the cord so firmly as this was tied. It was completely constricted at the point, and of course no blood could pass. The mother noticed the stoppage of the motion of the child about an hour before its birth. I have not noticed this state of things as being spoken of in any of the books. The mother did well.

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D. E. WELLS, M. D., Bethlehem, N. H.

#### COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING APRIL 28, 1877.

or mare the real new	Estimated Population, July 1, 1877.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1876.
New York	1,077,228	480	23,17	27.46
Philadelphia	850,856	297	18.15	22.88
Brooklyn	527,830	221	21.77	24.31
Chicago	420,000	129	15.95	20.41
Boston	363,940	158	22.58	23.39
Providence	103,000	1 31	15.65	18.34
Worcester	52,977	16	15.71	22.00
Lowell	53,678	25	24.22	22.21
Cambridge	51,572	18	18.15	20.54
Fall River	50,370	14	14.45	22.04
Lawrence	37,626		CONTRACTOR OF THE	23.32
Lynn	34,524	20	30.12	21.37
Springfield	32,976	6	9.46	19.69
Salem	26,739	12	23.34	23.57

SUFFOLK DISTRICT MEDICAL SOCIETY. — At the annual meeting, April 28th, the following officers were elected: President, Charles D. Homans: Vice-President, Calvin Ellis; Secretary, A. L. Mason; Treasurer, A. B. Hall; Librarian, B. J. Jeffries; Commissioner of Trials, Charles W. Swan; District Nominating Committee, George C. Shattuck; Committee of Supervision, George H. Gay, Samuel A. Green; Committee on Social Meetings, Calvin Stevens, George W. Gay, H. I. Bowditch, J. P. Oliver; Censors, Thomas Watternam, Edward N. Whittier, G. G. Tarbell, A. M. Sumner, Thomas Dwight; Councillors, S. L. Abbot, James Ayer, H. H. A. Beach, H. J. Bigelow, H. I. Bowditch, B. Brown, S. Cabot, P. M. Crane, D. W. Cheever, Hall Curtis, H. Derby, F. W. Draper, C. Ellis, H. Fitz, G. H. Gay, S. A. Green, F. B. Greenough, A. B. Hall, G. Hay, D. H. Hayden, R. M. Hodges, C. D. Homans, John Homans, W. Ingalls, J. B. S. Jackson, J. F. Jarvis, B. J. Jeffries, G. H. Lyman, F. Minot, F. E. Oliver, H. K. Oliver, John P. Reynolds, W. L. Richardson, G. C. Shattuck, A. D. Sinclair, D. H. Storer, C. W. Swan, J. E. Tyler, O. F. Wadsworth, C. E. Ware, J. C. Warren, James C. White, H. W. Williams.

ESSEX NORTH DISTRICT MEDICAL SOCIETY. — The annual meeting of the Essex North District Medical Society was held at Haverhill on Wednesday, the 2d inst. The following officers were chosen for the ensuing year: President, Dr. F. A. Howe; Vice-President, Dr. W. H. Kimball; Secretary and Treasurer, Dr. G. W. Snow; Corresponding Secretary, Dr. J. Crowell; Librarian, Dr. Sidney Drinkwater; Commissioner on Trials, Dr. W. H. Kimball; Councillors, Drs. G. W. Garland, C. P. Morrill, H. J. Cushing, J. Crowell, S. K. Towle, W. D. Lamb, E. Cross, R. C. Huse; Censors, Drs. J. C. Howe, E. P. Hurd, C. G. Carlton, O. F. Seavy, C. N. Chamberlain; Nominating Committee to State Society, Dr. G. W. Garland.

Dr. Eugene Howard, of Newburyport, on recommendation of the Board of Censors, was accepted as a fellow of the society.

The annual address was by Dr. E. P. Hurd, of Newburyport, on Neuralgia.

BOOKS AND PAMPHLETS RECEIVED. — I. A Report on the Percentage of Near-Sight found to exist in the Class of 1880 at Harvard College, with some Account of Similar Investigations. II. An Account of the Phakometer of Snellen. By Hasket Derby, M. D. (Reprinted from the Boston Medical and Surgical Journal.) Cambridge: Riverside Press. 1877.

Report No. 9 of the Channing Home for the Year ending March 31, 1877.

Two Cases of Esophagotomy. By LeRoy McLean, M. D., Surgeon to the Troy Hospital. (Reported in the New York Medical Record.) West Troy, N. Y.: James Treanor. 1877.